IMAGE

GEORGE EASTMAN HOUSE OF PHOTOGRAPHY

JOURNAL OF PHOTOGRAPHY OF THE GEORGE EASTMAN HOUSE

VOLUME 5 NUMBER 1 JANUARY, 1956

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EDITORIAL

We are proud to open our fifth year of publication of IMAGE with a new, expanded format. The increased number of pages will permit us to print the longer articles which some subjects need if they are to be presented for their full worth. The new size also makes it possible to include more material on moving pictures, an activity of the George Eastman House which has reached major importance.

Our editorial policy will continue to be historical—whether the subject is a biographical sketch of a forgotten pioneer photographer, or a critical discussion of contributions made by a contemporary scientist. We shall endeavor to keep an even balance in each issue of the various phases of photography, old and new, which are represented in the Eastman House.

The collection of apparatus, books, and photographs in the George Eastman House is unequalled anywhere in the world. It is our hope, in the pages of IMAGE, to describe and interpret the most important items in this vast collection. We do not propose to limit ourselves to material in our collection, however, and we will welcome contributions to our pages from anyone interested in the history of photography in its largest sense.

The aim of IMAGE is to record and clarify the past and present progress of photography, thus defining and vivifying the traditions of what has become the universal language of our time.

Muybridge and the First Motion Picture

THE HORSE IN THE HISTORY OF THE MOVIES

by Beaumont Newhall

On the evening of May 4th, 1880, the San Francisco Art Association presented a program so unusual that three newspapers reported the event in detail. Eadweard Muybridge, a local photographer who had recently taken the first photographs ever made of a galloping horse, was showing some of his recent animal pictures. What made this presentation memorable was that the images on the screen were not static. They moved, with all the motions of the real horse. "Nothing was wanting but the clatter of the hoofs upon the turf and an occasional breath of steam to make the spectator believe that he had before him the flesh-and-blood steeds," wrote the *San Francisco Call*. "Horses of life size were represented running, trotting and jumping; men, deer, bulls and dogs ran with all the motions of life; horses were shown running past each other in different directions," the *San Francisco Alta California* noted and concluded, "Mr. Muybridge has laid the foundations of a new method of entertaining the people, and we predict that his instantaneous photographic, magic lantern zoetrope will make the round of the civilized world."

Motion had been created on the screen before. In 1870 Henry Renno Heyl had shown in Philadelphia pictures of himself dancing a waltz with a partner. He had had photographs made by time exposure of static poses of the dance. When thrown upon the screen intermittently, the individual pictures merged in the mind of the spectator to give the illusion of motion, by the phenomenon known as persistence of vision. And in Paris, Jules Reynaud was projecting animated cartoons which he had painstakingly drawn himself.

Nobody had *reproduced* action, by taking a series of instantaneous photographs in rapid sequence and then projecting them intermittently on a screen before an audience. Yet this was exactly what Muybridge did. By every definition of cinematography, Muybridge's "instantaneous photographic, magic lantern zoetrope" was the first motion picture presentation in the world.

There was probably no photographer on the West Coast more technically able than Eadweard Muybridge when, in 1873, Governor Leland Stanford asked him to photograph his race horses. He had, he wrote in *Anthony's Photographic Bulletin*, photographed "within the Arctic Circle and under the Equator, at an elevation of 10,000 feet and beneath the waters of our Bay, with exposures ranging from 18 hours to less than the 2000th part of a second."

He had come to America from England, where – in the Saxon town of Kingston-on-Thames, he was born in 1830. His strange name was an affectation, assumed in the belief that it was the Saxon for his true name, Edward J. Muggeridge. By 1867 he was in San Francisco. Yosemite Valley was already attracting photographers, and he went there with his camera. Under the pseudonym "Helios," twenty of his photographs were published in the first guide book to the valley, John S. Hittell's *Yosemite: Its Wonders and Beauties*.

When the United States Government sent a military force to Alaska in 1868, to formally accept the territory purchased the previous year from Russia, Muybridge went along to take photographs. On his return to California he traveled up and down the coast, recording lighthouses, gold mining, the vintage, and the animals at Niblo's Gardens, an amusement park in San Francisco.

Like all photographers of the day, Muybridge was using the wet plate or collodion process. Besides the difficulty of manipulation, this process was unsatisfactory in its color rendition. The plates were overly sensitive to blue, and as a consequence blue skies were greatly over-

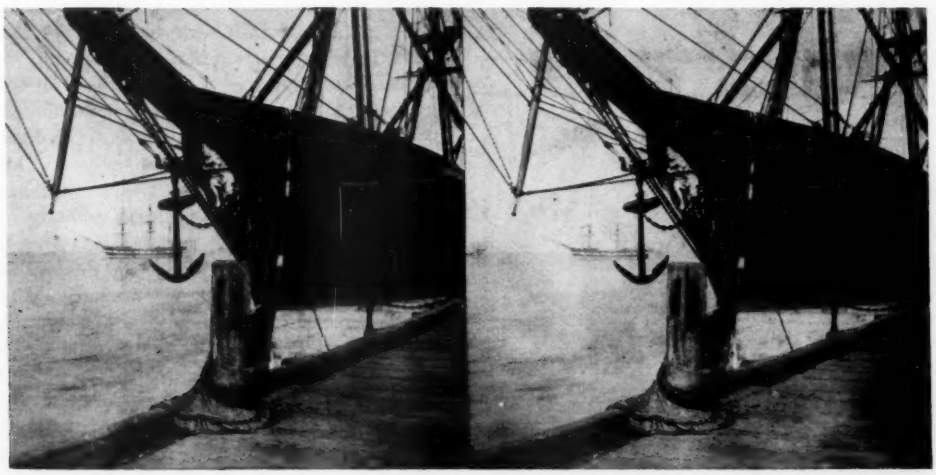
exposed when foregrounds were given the correct exposure. Photographers contented themselves with showing sky as unmodulated white in their prints, or superimposed clouds by double printing with a separate, masked negative. In 1869 a technical note signed "Helios" appeared in the *Philadelphia Photographer*, describing a "sky shade." The device was a spring-actuated shutter, so arranged to give a greater exposure to the upper than to the lower part of the plate, thus compensating for the exposure differential between foreground and sky. Shutters in those days were not standard equipment, and few photographers had even attempted to take instantaneous exposures. Muybridge's early experimentation was to be of great value when he was asked to photograph a horse in action.

The *Alta*, in its issue of April 7, 1873, carried two stories on Muybridge. The first was an account of the new series of photographs of Yosemite Valley which he had just made on negatives 20x24 inches in size, at great physical effort. The second article, headed "Quick Work," described a photograph of "Occident," Leland Stanford's favorite trotter, taken at an exposure of 1/500 of a second.

The ex-Governor, the article points out, "wanted his friends abroad to participate with him in the contemplation of the trotter 'in action,' but did not exactly see how he was to accomplish it until a friend suggested that Mr. E. J. Muybridge be employed to photograph the animal while trotting. No sooner said than done. Mr. Muybridge was sent for and commissioned to execute the task, though the artist said he believed it to be impossible . . . "

There is a picturesque story, which was given wide circulation by the late Terry Ramsaye in his history of moving pictures, *A Million and One Nights*, that Stanford commissioned the photograph to settle a bet: "It was his solemn and somewhat lone assertion," Ramsaye wrote, "that at various gaits a horse in full speed took all his four feet off the ground at once . . . Eventually in 72 (sic) the day came when the last word was, 'I'll bet you.' It was a right princely bet, too, being in the sum of $25,000, good California gold. The traditional story always refers to it as a wager, gaining thereby some flavor of antiquity and a savor of extra gentility."

From what source Ramsaye gained this story he did not reveal. Not a hint of it is contained in any of the contemporary accounts of the Stanford commission, all of which Muybridge care-



Ship *Golden Fleece* photographed by Muybridge in San Francisco in 1868.

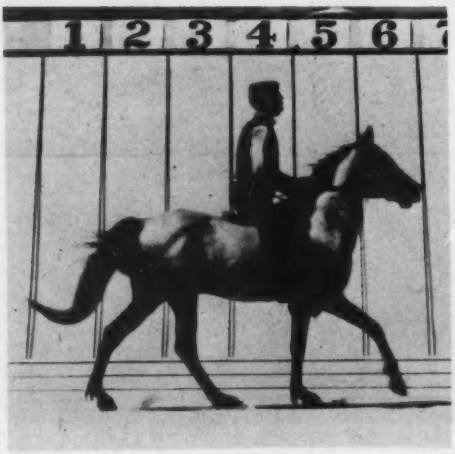
fully preserved in a great scrap book now in the Kingston-on-Thames Public Library.

The photograph described by the *Alta*, if it exists, has never been published. It took three days to take it. First the trotter had to be trained to run over a track covered with white sheets. Then Muybridge had to devise a shutter. The result, wrote the *Alta*, was "a perfect likeness of the celebrated horse. The space of time was so small that the spokes of the wheels of the sulky were caught as if they were not in motion. This is considered a great triumph as a curiosity in photography—a horse's picture taken while going thirty-eight feet in a second!"

Yet the photographs must have been unsatisfactory, because it was another five years before Muybridge could claim success.

During these five years Muybridge photographed an Indian campaign, became involved in as sordid a murder as the West had seen since the Gold Rush days, and penetrated into the Central American jungle with his wet plate camera.

In Northern California, near the Oregon border, a handful of Modoc Indians determined to hold their own. For years they plundered and attacked white men. Negotiation failed, and the United States determined to punish them. Seventy-five Indians, with their wives and children, held a thousand troops at bay during the winter and spring of 1873. Muybridge, with his stereo camera, photographed the troops in the field, and after their capture, the leaders of the Modocs.



Single picture from Muybridge sequence, taken in 1879. Enlargement from collodion lantern slide. Gift to George Eastman House from Kingston-on-Thames Public Library.

Assignments kept Muybridge away from home. On his return from one of his numerous trips, friends warned him that the conduct of a certain Major Harry Larkyns to his family "was not that of a friend." Larkyns, a 35-year-old Englishman, was a newcomer to San Francisco. He claimed that his military title was for service in the British Army in India. A poetaster and critic of the stage, he got a job as a newspaper reporter. Muybridge beat him up in a fist fight at a newspaper office and extracted a promise that he would stay away from Mrs. Muybridge. When it was apparent that intimacies continued, the wayward wife was packed off to Portland, Oregon, and Larkyns left for a job at Calistoga making maps of mines.

One day in October, 1874, Muybridge was visited by his wife's former nurse, who requested money. This he refused to pay. She then produced a packet of recent letters from Larkyns to the absent Mrs. Muybridge "written," the *Alta* reported, "with a pen dipped in love." There was more: evidence that the child Muybridge called his son was not his own.

His friends could not restrain him: Muybridge headed for Calistoga. At eleven o'clock that night he was at the Yellow Jacket mine. He knocked at a door. "I want to see Major Larkyns; I will only detain him for a moment," he shouted. Larkyns was playing cards with two gentlemen and some ladies. He excused himself, opened the door, and looked out into the night. "Where are you, sir; I cannot see you." "My name is Muybridge," came the answer, and with it a pistol shot. Larkyns died instantly.

The trial, which was held in Napa City in February, 1875, was a farce. The defense attempted to prove temporary insanity. Muybridge testified that as a result of a stagecoach accident in 1860, when he was pitched on his head, he had lost for some time sense of taste and smell, and had suffered from double vision. His former employer, William Herman Rulofson, was put on the stand. Muybridge, he declared, was "most eccentric. In his work he would not take a picture unless the view suited him." There was no question that murder had been committed. In defiance of the judge's charge to the jury, the law was not defended,

2 Sheets—Sheet 1.

E. J. MUYBRIDGE.

Method and Apparatus for Photographing Objects in Motion.

No. 212,865. **Patented Mar. 4, 1879.**

Fig 1

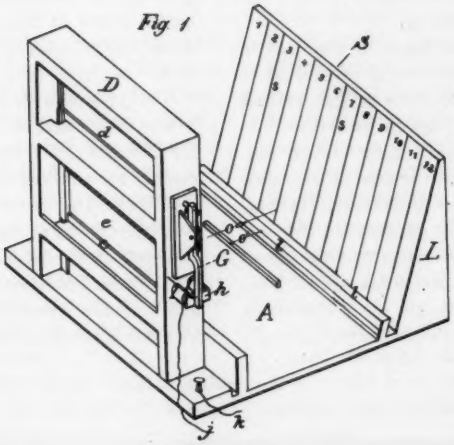
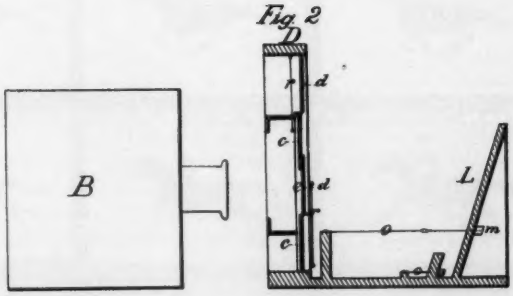


Fig. 2



Witnesses
D. B. Lawler
H. F. Clark

Inventor
Edward J. Muybridge
per Jno L. Boone
Attorney

A diagram from Muybridge's patent for his system of photographing animals in motion. Threads, O, stretched across the track, tripped when broken by running horse; electric switch, G, releasing shutters, E.

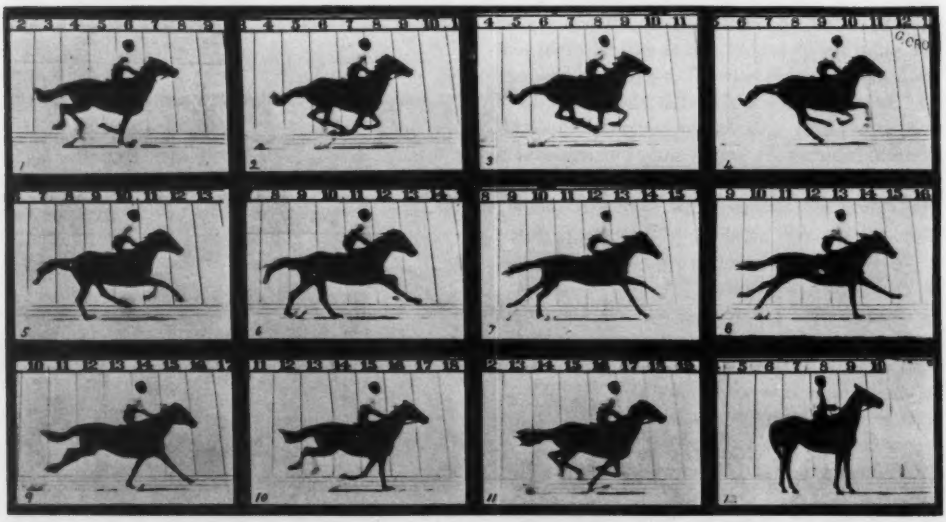
and the verdict of "not guilty" was based on the belief that Muybridge's actions were justified.

Although acquitted, Muybridge found it prudent to leave the country. On March 11 he arrived in Panama. He next went to Guatemala, where he made an extensive photographic documentation of coffee plantations and penetrated into the jungle to photograph forgotten ancient churches.

Back in California, he resumed photographing Leland Stanford's horses. On August 2, 1877, he announced to the editors of the *Alta* that he had met with success.

"When you did me the honor of asserting to Gov. Stanford your confidence in my ability to make a phot. of 'Occident' while he was trotting at full speed—provided I could be induced to devote my attention to the subject—I will candidly admit I was perfectly amazed at the boldness and originality of your proposition. Having, however, given my patient devotion to the task the Governor imposed upon me, and instituted an exhaustive series of experiments with chemicals and apparatus, it affords me pleasure to submit to you a proof that your flattering confidence in the results of my endeavors was not altogether erroneous, and I herewith enclose you a photograph made from a negative which I believe to have been more rapidly executed than any ever made hitherto. The exposure was made while 'Occident' was trotting past me at the rate of 2.27 (minutes per mile), accurately timed, or 36 ft. in a second, about 40 ft. distant, the exposure . . . being less than 1/1000 part of a second. . . The picture has been retouched, as is customary at this time with all first-class photographic work, for the purpose of giving a better effect to the details. In every other respect, the photograph is exactly as it was made in the camera."

The photograph which Muybridge referred to was published in the *Resources of California* for October, 1877, as a wood-engraving. Immediately the authenticity of this photograph was attacked. "The driver is not driving a horse, he is sitting for his photograph," the San Francisco *Evening Post* complained. "He is stiff, unnatural; he does not encourage his horse; he would lean forward were he driving at the rate of 36 feet per second; he would be alive with move-



First successful photograph of galloping horse taken by Muybridge at Menlo Park, California, 1878.

ment, and the 'hie Yar' would, as it were, ring in our ears." The fact that the photograph was retouched robbed it of truth, and it failed completely to convince.

Muybridge began anew, and by the summer of 1878 was using, not one, but a battery of 12 cameras. Each was fitted with a guillotine shutter, tensed by a rubber band. An electromagnet was adjusted to release them. Wires were stretched across the track, opposite each camera, and when the iron rims of the wheel of the sulky shorted the wires as it passed over them, the shutter was released.

On Saturday, June 15, 1878, Leland Stanford invited the sports writers of the San Francisco papers to visit Menlo Park and see for themselves how Muybridge operated. It was a damp, foggy day when the party left San Francisco, and overcoats were comfortable. But when they arrived at Menlo Park the sun was shining brilliantly. The track dazzled like new fallen snow; powdered lime had been sprinkled on it, and a screen, covered with rock salt, was set up opposite the twelve cameras. But let an eye witness, the sports writer of the *California Rural Press*, describe what he saw.

"The trotter 'Abe Edgington' was brought out . . . and after being warmed up a little over the track, after the apparatus was all ready, he was put to a 2:20 speed past the screen. He came down the track in splendid style, with a good, square motion and firm trot. As soon as the wheel struck wire No. 1, camera No. 1 was closed by the means described, and the first picture was taken; when it struck No. 2 the second camera had the second picture, and so on until 12 pictures were taken 21 inches apart. The sound of the slides closing was like a continuous roll, so quickly was the feat accomplished . . . In photography of a running horse . . . fine black threads were placed across the track and connected so that the armatures would release the slides as before. The racing mare 'Sallie Gardner,' a handsome animal, was brought out and the threads placed so as to strike her breast as she went by. The instruments were made ready, the signal given; and she came rushing down the track like a whirlwind. . . When the mare broke the eighth or ninth thread, she became aware of something across her breast, and gave a wild bound in the air, breaking the saddle girth as she left the ground. This gave a curious picture of the mare with her legs wildly spread and the broken girth swinging in the air just as it is separating."

Six series of photographs were published, showing the trot, the pace, and the gallop. They were sensational, and were reproduced both abroad and at home. For centuries artists had represented the horse in gallop with front feet reaching forward and the hind feet straight behind—in the attitude of the conventional hobby horse. Muybridge showed that the only time all four feet of a galloping horse are off the ground at once is when they are bunched together beneath the belly.

When the French scientist Etienne Jules Marey, who had been experimenting in animal locomotion, saw these photographs, he wrote Muybridge congratulating him, and suggesting that they be shown in the zoetrope—a slotted drum which had been used for decades to show animated cartoons, drawn on strips and fitted inside the drum. As the drum revolved, the spectator saw one picture after another through the slits. An illusion of motion was thus produced.

Already the *Scientific American* had suggested the same thing, and had printed drawings made from the photographs which their readers were invited to cut out and put in a zoetrope.

Perhaps these suggestions inspired Muybridge to go one step further and *project* the photographs, by means of an adaptation of the zoetrope, so that a whole audience could see them. The apparatus he used at the San Francisco Art Association in 1880 must have been similar to the projector now in the Kingston-on-Thames Public Library. Twelve photographs of as many phases of motion were fastened radially upon glass discs, which were caused to revolve in the focal plane of a conventional lantern slide projector. A second disc, slotted, was caused to revolve in the opposite direction, serving as a shutter. In 1881 Muybridge visited France and England, with this "zoogyroscope" or, as he later called it, "zoopraxiscope." Meisonnier, the celebrated painter, invited his friends to see Muybridge's moving pictures in his studio; one of the most interested Parisians was Marey, who soon built an improved apparatus. Instead of taking the separate photographs with separate cameras, he devised a single camers in which a glass plate moved intermittently. Later he invented, with Georges Demeney, a camera which

Muybridge's Projector, the "zoogyroscope," which he used in 1880. Glass disc, containing photographs from his sequences, was revolved in front of projector lens. Slotted disc was revolved in opposite direction, serving as shutter. Kingston-on-Thames Public Library. Photo, Bernard Alfieri.

THE ZOOGYROSCOPE.

Photographs Illustrating Animals in Motion.

Interesting Exhibition by Muybridge—Horses Trotting, Dogs Running, Birds Flying—Athletic Antics.

A private exhibition of the zoogyroscope was given by E. J. Muybridge, the photographer, at the gallery of the San Francisco Art Association, last evening. As is known to the readers of THE CALL, Mr. Muybridge has been engaged during the past two years in making photographic representations of animals in motion, under the patronage of Governor Leland Stanford, at the residence of the latter at Menlo Park. Governor Stanford became greatly interested in the subject, and, gratified by the maiden efforts of Muybridge in photographing the movements of his favorite trotting horse, Occident, he gave him *carte blanche* to pursue his experiments. A number of instruments were constructed especially for the purpose, in Europe and this country, and at the Governor's place, Palo Alto, every facility was afforded for carrying on his investigations, until finally, by the combination of the magic lantern and the zoogyroscope, he has arrived very nearly to perfection. It is estimated that Governor Stanford has expended between $40,000 and $50,000 in this "hobby," as some of his friends term it. At

THE EXHIBITION LAST EVENING

A large number of views were given of the different gaits of horses—the walk, the canter, the pace, the trot, the run, etc. The camera used in taking these views caught the object and transferred it to the screen in the first thousandth part of a second—a degree of time that it is difficult for the mind to comprehend. Stonehenge and other writers on the horse have asserted that that quadruped in trotting, as in walking, always has two of its feet upon the ground at a time. The experiments of Muybridge show that in motion the horse frequently has three and at times all four feet from the ground. It has generally, too, been held that the toe strikes the ground first. Muybridge shows that it is in all cases the heel. The strides of different horses were represented; that of Elaine, which covered 16 feet, Abe Edgerton 18 feet, and Clay 17 feet. The latter horse Muybridge said had a very peculiar stride. When at the top of his speed and clearing 17 feet, he was for almost three feet entirely clear of the ground, all four feet being in the air for that distance. Several interesting views were given, showing the change in the position of a horse's limbs as he began to break. During a break, and as he was gradually settled by his driver. In the representation of running horses, a fact was shown that explained what had long been a mystery to horsemen: why running horses broke down sooner than trotting horses. It was found that the former threw the weight of their body upon the fore feet—in fact, the whole weight is, for a time, thrown upon one fore foot. In leaping, it was shown that one fore foot strikes the ground first, followed by the other placed slightly in advance, and then the hind feet are brought down together closely behind. What attracted the most attention, in fact aroused a pronounced flutter of enthusiasm from the audience, was the representation by all of

THE ZOOGYROSCOPE

Of horses in motion. While the previous views had shown their positions at different stages of motion, these placed upon the screen apparently the living, moving horse. Nothing was wanting but the clatter of the hoofs upon the turf and an occasional breath of steam from the nostrils, to make the spectator believe that he had before him genuine flesh-and-blood steeds. In the views of hurdle-leaping the simulation was still more admirable, even to the motion of the tail as the animal gathered for the jump, the raising of his head, all were there. Views of an ox trotting, a wild bull on the charge, greyhounds and deer running, and birds flying in mid-air, were shown. The zoogyroscope is a circular glass, having a miniature picture of the animal to be represented in motion at regular intervals upon its surface, and equi-distant with them pictures are small slots which admit the light from the oxy-hydrogen lanterns, and as the plate is turned the effect is similar to that produced by the well-known toy—the zootrope—and shows the animals in apparent actual motion. The exhibition concluded with a number of fine, instantaneous photographic views of athletes, in various positions.

A series of public exhibitions will be given this and every evening during the week.

Reproduction of column from the *San Francisco Call* for May 5, 1880.

made use first of paper and then film.

The system of moving picture taking on which all modern techniques are based is an improvement of the Marey-Demeney machine, worked out by Thomas Alva Edison. Using George Eastman's film, slit in 35mm. width, he produced his Kinetograph (camera) and Kinetoscope (viewing peep show viewer) which he introduced to the public in 1894. Projection came within the year, notably by the Lumière Brothers in France.

Edison always acknowledged his debt to Muybridge. In a letter dated January 24, 1925, and published in the *Transactions of the Society of Motion Picture Engineers* for that year, he quoted from his early notes:

"In the year 1887 the idea occurred to me that it was possible to devise an instrument which should do for the eye what the phonograph does for the ear, and that by a combination of the two, all motion and sound could be recorded and reproduced simultaneously. This idea, the germ of which came from a little toy called the zoetrope and the work of Muybridge, Marey, and others, has now been accomplished, so that every change of facial expression can be recorded and reproduced life size."

Muybridge became more interested in the analysis of motion than in its synthesis, and his subsequent motion picture work was merely in demonstration of the accuracy of his individual photographs. In 1885 he was given a grant by the University of Pennsylvania, and produced over 1500 sets of negatives of animals of all kinds and human models. In the hope that these photographs would take the place of live models for artists, and thus prove to sell well, most of the photographs are of nudes in all manner of activity. To take them he used a refined technique. For wet plates, he substituted Cramer's dry plates: for a battery of cameras, two 12-lens cameras placed either vertically or horizontally; for the contact shutter release, a clockwork driven timer. Seven hundred and eighty-one plates were published in collotype reproductions, folio size, under the title *Animal Locomotion*. He lectured, and showed his "zoopraxiscope" movies at the 1893 World's Fair, under United States Government supervision. He was building a scale model of the Great Lakes in the backyard of his house at Kingston-on-Thames, England, where he had retired, when he died in 1904.

The Little Gallery

ITS SERVICE TO THE CAREER PHOTOGRAPHER

by Minor White

TODAY THE DISCOVERY OF NEW TALENT in photography is little short of an obsession; advertising, popular magazines, newspapers all search for the young photographer, apparently for a certain freshness. Early promise has even been featured by prestige museums. As a rule, the promise is discovered, used up, and discarded without regard for whether or not the youngster has the other requirements necessary to make a career of photography.

What do we do about the man who has talent and who sets about serving that talent the rest of his life?

At George Eastman House this problem has received no little consideration. And we have found that a request for shows from fairly well known persons, who have drifted from sight, works wonders. Especially to the men and women who have dedicated themselves to some ideal in photography. Many, finding that their ideal is unpopular, have imperceptibly let the dust accumulate on their cameras. An invitation to show originates a whirlwind of activity, the man's eye looks at the world again with the sparkle and assurance of original vision and new photographs accumulate. Such experience is hardly startling; in fact, it's rather to be expected, still it is the very kind of affirmation that the career photographer needs at intervals during his life.

Who is to provide such encouragement and affirmation to the men and women choosing photography by which to add their life to the esthetic growth of the world? No one museum, obviously. Many museums are not enough to provide the outlets for the number of discovered talents in our own decade. More outlets are needed and the little galleries are the answer.

Little galleries are well known, still they drift around in a limbo of some sort to most of us. This seems as good a time as any to clarify their potentials and their services to public and artist-photographer alike.

The generously gifted photographer is rare, that is true; but he is the potential great photographer, and as such is an asset to the community. He does not need to be pampered; but we might as well face the facts, constant rejection by available outlets is ultimately destructive. When popular magazines turn him down because he is "too good" or "over the heads of our readers," he may tighten his belt and go on, but the experience does not make him sing "Praise the Lord and Pass the Ammunition." On the other hand, for this man, acceptance by such outlets as the pictorial section of the Photographic Society of America is decidedly not affirmation, for here the expressive purposes of the individual are antithetical to the craft purposes of the group.

We can neglect such men for the most part. They have the stature to carve their own places in the world. So far as we do, the public stands to lose, especially if it waits until such photographers are dead. Photography is not as permanent as other art forms, the materials are flimsy for one thing. More than that, photography itself is of the day or of the moment. It interprets the changing world as fast as it changes. It is of the people, for the people and by the people—but today! And the artist-photographer, as well as the photo-reporter, needs to be included in this generalization. Neglect of these potential photographers deprives our own people of their interpreters.

The little gallery is about the best answer to this problem that has been invented to date. It has a long tradition and appears in a wide variety of forms. It may be one devoted passionately to the creative, whether it be painting or photography, such as Alfred Stieglitz conducted most of his life. It may be some such combination of gallery and coffee shop as the present LIMELIGHT in New York, or the personally-maintained one such as A PHOTOGRAPHER'S GALLERY in the same city. The art store in a small town, when it features a photographic exhibit of a local aspirant, is a photographic little gallery for the occasion. Commercial art galleries sometimes show photographs. When they do, the commercial overtone be-

comes an issue—something that in the usual little gallery slips into the background.

The little gallery does not work in a vacuum. There is the prestige museum on one side and the magazines on the other. Often the little gallery idea is just one function of a large museum, and the portfolio section of a magazine is often an echo of it. Yet the little gallery, as a physically separate unit in itself, probably offers the liveliest possible encouragement. The public gets a chance to see what the new and untried are up to and to find things for itself that are pleasant or exciting. The critic can discover, he can evaluate, encourage, estimate, or, if he has gotten up on the wrong side of the bed, neatly turn the biting phrase. The gallery owner has his own rewards. And there seem to be as many rewards for trying to keep a small gallery open as there are people running them. Some with a small private income want to give men and women starting in a career (or mid-way) a chance; others passionately believe in what they show, others recognize a need in the community and fill it for as long as they can. It's an individualist's paradise inhabited by protagonists.

The photographer himself probably derives the most benefit. He has a chance to see his own work on the impersonal wall of a gallery. This is so different from the atmosphere of his own studio or home that he can see it, often for the first time, with a glimmering of impartiality. He gets the invaluable chance to see it with a modicum of how other people see it—and a modicum of objectivity is about all that is ever afforded a man regarding his own work. He also stands to benefit by what the critic might say; and if he feels that the critic is perceptive and sincere he can get one more light thrown on himself and his work.

By a kind of reverse curve, the little gallery fits the needs of the neophyte simply because it does not carry too much weight. To be successful in a small gallery is exhilarating but not dangerously so; to be unsuccessful in a small gallery is not a calamity. Whereas either success or failure in a prestige gallery, while it might not be fatal, is lived up to or lived down only with considerable effort.

The big museum in a medium or large sized city often plays the role of the little gallery for one reason or another. Any big museum assumes the responsibility of promoting and encouraging the regional talent, and if there is no going little gallery, usually feels itself obliged to encourage and foster the neighboring beginners—in addition to its regular program. This poses some problems. The important museum has a prestige to maintain that is built on the excellence of the work shown, the taste of the staff and the brilliance of its educational displays. To show the work of newer photographers rarely enhances such prestige unless some way of isolating such displays is devised. A separate gallery is the usual device. In addition, many large museums have discovered that there is insufficient local material of museum quality to keep a photographic show on view at all times. Then, when they turn to traveling shows to fill in the anticipated gaps, few are available. Also few museums have a curator of photography who can scour the country for individual exhibits of the required quality or who has the responsibility of "idea shows." The San Francisco Museum of Art, for instance, located in the midst of one of the world's creative centers, experiences the difficulties just mentioned.

Both photographer and public are best served in a city that possesses the prestige museum as well as a few little galleries, and which tacitly maintain between them a flexible hierarchy. Ideally there would be no point made of the fact that the little gallery acts to discover and screen for the museum; or that an exhibition in the museum would mean that the man had "arrived"; for the little gallery needs to show the work of "arrived" men, too—for its own prestige.

Eastman House has addressed itself only in the past two years to the problem of the contemporary photographer who, in spite of overwhelming emphasis on popular photography, has somehow taken the camera as a way to spirit —and unpopular photography.

Because Eastman House is new in Rochester, the city's other museums have continued to exhibit the work of the local photographers and the salons. Consequently its "Young Photographer's Gallery" shows the work of men from all over the country. This means, of course, that the persons shown live so far away that the value of seeing their work on objective walls is lost to them. The staff supplants this experience with written critical reports to the photographer himself. These critical reports are written knowing full well that an exchange of talk would assure the encouragement intended.

The Film Career of Joan Crawford

Paid, 1930.

IN THE 1952 PRODUCTION *Sudden Fear* a quotation from *Julius Cæsar* is used: "For I am constant as the Northern Star of whose true fixed and resting qualities there is no fellow in the firmament." "The constant star" might well be history's appellation for Joan Crawford, otherwise known as Billy Cassin and Lucille LeSueur. No other motion picture actress can boast the extraordinary record of thirty unbroken years playing leading roles in major Hollywood productions. The list of leading men who played opposite Joan Crawford reads like a directory of American film actors and ranges from such idols as John Gilbert, Ramon Novarro, Clark Gable and Gary Cooper, to such stalwart heavies as Conrad Veidt and Lon Chaney. Until she won an Academy Award as the best actress of 1945 for her performance in *Mildred Pierce*, many critics took her work rather for granted as merely the expected splendour of an extraordinarily vivid personality. Today, looking back at Joan Crawford's earlier films such as *Our Dancing Daughters* and *Rain*, the fact is inescapable that the unique Crawford career is based on the firmest possible foundation of exceptional acting ability, almost ideally refined for the special requirements of motion pictures. In many of her films Miss Crawford has endured the most devastating competition imaginable for any star, for she has acted with Greta Garbo, with Norma Shearer, Constance Bennett, Marie Dressler, Rosalind Russell, Margaret Sullavan and Greer Garson. In no film, not even *Grand Hotel*, did any of these formidable actresses

manage to outshine the enduring brilliance of Joan Crawford in the minds of either public or critics who reviewed the pictures. The film career of Joan Crawford remains absolutely unique in the entire history of motion pictures as of this moment. The fact that no contemporary star has more steadfast determination to perform with even greater success is reason to believe that the greatest work of this most constant star may still be achieved in the future.

James Card

Laughing Sinners, 1931.

An index to the films of Joan Crawford

THE SILENT PERIOD

1925 **PRETTY LADIES (MGM)**—With Zasu Pitts, Tom Moore, Norma Shearer, Dorothy Seastrom. Directed by Monta Bell.

OLD CLOTHES (MGM)—With Jackie Coogan. Directed by Eddie Cline.

THE ONLY THING (MGM)—With Eleanor Boardman, Conrad Nagel. Directed by Jack Conway.

SALLY, IRENE AND MARY (MGM)—With Constance Bennett, William Haines. Directed by Edmund Goulding.

1926 **TRAMP, TRAMP, TRAMP (First National)**—With Harry Langdon. Directed by Harry Edwards and Frank Capra.

THE BOOB (MGM)—With Gertrude Olmstead, Charlie Murray. Directed by William A. Wellman.

PARIS (MGM)—With Charles Ray. Directed by Edmund Goulding.

1927 **WINNERS OF THE WILDERNESS (MGM)**—With Tim McCoy, Roy D'Arcy. Directed by W. S. Van Dyke.

THE TAXI DANCER (MGM)—With Owen Moore. Directed by Harry Millarde.

THE UNDERSTANDING HEART (MGM)—With Francis X. Bushman, Jr. Directed by Jack Conway.

THE UNKNOWN (MGM)—With Lon Chaney. Directed by Tod Browning.

TWELVE MILES OUT (MGM)—With John Gilbert. Directed by Jack Conway.

SPRING FEVER (MGM)—With William Haines. Directed by Edward Sedgwick.

1928 **WEST POINT (MGM)**—With William Haines. Directed by Edward Sedgwick.

ROSE-MARIE (MGM)—With Gibson Gowland, House Peters, James Murray. Directed by Lucien Hubbard.

ACROSS TO SINGAPORE (MGM)—With Ramon Novarro. Directed by William Nigh.

FOUR WALLS (MGM)—With John Gilbert, Carmel Myers. Directed by William Nigh.

OUR DANCING DAUGHTERS (MGM)—With John Mack Brown, Anita Page. Directed by Harry Beaumont.

DREAM OF LOVE (MGM)—With Carmel Myers, Nils Asther. Directed by Fred Niblo.

1929 **THE DUKE STEPS OUT (MGM)**—With William Haines. Directed by James Cruze.

OUR MODERN MAIDENS (MGM)—With Rod La Rocque, Douglas Fairbanks, Jr. Directed by Jack Conway.

The Unknown, with Lon Chaney, 1927
The Bride Wore Red, 1937

THE SOUND FILMS

1929 **UNTAMED (MGM)**—With Robert Montgomery. Directed by Jack Conway.

THE HOLLYWOOD REVUE (MGM)—With Bessie Love, Norma Shearer. Directed by Charles F. Riesner.

1930 **MONTANA MOON (MGM)**—With John Mack Brown, Ricardo Cortez. Directed by Malcolm St. Clair.

OUR BLUSHING BRIDES (MGM)—With Anita Page, Robert Montgomery. Directed by Harry Beaumont.

PAID (MGM)—With Robert Montgomery. Directed by Sam Wood.

1931 **DANCE, FOOLS, DANCE (MGM)**—With Clark Gable, William Holden. Directed by Harry Beaumont.

LAUGHING SINNERS (MGM)—With Neil Hamilton. Directed by Harry Beaumont.

THIS MODERN AGE (MGM)—With Neil Hamilton. Directed by Nicholas Grinde.

POSSESSED (MGM)—With Clark Gable. Directed by Clarence Brown.

1932 **LETTY LYNTON (MGM)**—With Robert Montgomery, Nils Asther. Directed by Clarence Brown.

GRAND HOTEL (MGM)—With Greta Garbo, John Barrymore. Directed by Edmund Goulding.

RAIN (United Artists)—With Walter Huston. Directed by Lewis Milestone.

1933 **TODAY WE LIVE (MGM)**—With Gary Cooper. Directed by Howard Hawks.

DANCING LADY (MGM)—With Clark Gable, Fred Astaire. Directed by Robert Z. Leonard.

1934 **SADIE McKEE (MGM)**—With Gene Raymond, Esther Ralston. Directed by Clarence Brown.

CHAINED (MGM)—With Clark Gable. Directed by Clarence Brown.

FORSAKING ALL OTHERS (MGM)—With Clark Gable, Rosalind Russell. Directed by M. S. Van Dyke.

1935 **NO MORE LADIES (MGM)**—With Robert Montgomery, Franchot Tone. Directed by Edward H. Griffith.

I LIVE MY LIFE (MGM)—With Brian Aherne. Directed by W. S. Van Dyke.

1936 **THE GORGEOUS HUSSY (MGM)**—With Robert Taylor, James Stewart. Directed by Clarence Brown.

LOVE ON THE RUN (MGM)—With Clark Gable, Franchot Tone. Directed by W. S. Van Dyke.

1937 **THE LAST OF MRS. CHEYNEY (MGM)**—with William Powell, Robert Montgomery. Directed by Richard Boleslawski.

THE BRIDE WORE RED (MGM)—With Franchot Tone, Robert Young. Directed by Dorothy Arzner.

1938 **MANNEQUIN (MGM)**—With Spencer Tracy, Alan Curtis. Directed by Frank Borzage.

THE SHINING HOUR (MGM)—With Margaret Sullavan, Robert Young. Directed by Frank Borzage.

Joan Crawford, 1929

1939 **THE ICE FOLLIES OF 1939 (MGM)**—With James Stewart. Directed by Reinhold Schunzel.

THE WOMEN (MGM)—With Norma Shearer, Rosalind Russell. Directed by George Cukor.

1940 **STRANGE CARGO (MGM)**—With Clark Gable, Peter Lorre. Directed by Frank Borzage.

SUSAN AND GOD (MGM)—With Frederick March, Rita Hayworth. Directed by George Cukor.

1941 **A WOMAN'S FACE (MGM)**—With Melvyn Douglas, Conrad Veidt. Directed by George Cukor.

WHEN LADIES MEET (MGM)—With Robert Taylor, Greer Garson. Directed by Robert Z. Leonard.

1942 **THEY ALL KISSED THE BRIDE (Columbia)**—With Melvyn Douglas, Roland Young. Directed by Alexander Hall.

REUNION IN FRANCE (MGM)—With John Wayne, Albert Basserman. Directed by Jules Dassin.

1943 **ABOVE SUSPICION (MGM)**—With Fred MacMurray, Conrad Veidt. Directed by Richard Thorpe.

1944 **HOLLYWOOD CANTEEN (Warners)**—Directed by Delmar Daves and LeRoy Prince.

1945 **MILDRED PIERCE (Warners**—With Jack Carson, Zachary Scott. Directed by Michael Curtiz.

1947 **HUMORESQUE (Warners)**—With John Garfield, Oscar Levant. Directed by Jean Negulesco.

POSSESSED (Warners)—With Van Heflin, Raymond Massey. Directed by Curtis Bernhart.

DAISY KENYON (Fox)—With Dana Andrews, Henry Fonda. Directed by Otto Preminger.

1949 **FLAMINGO ROAD (Warners)**—With Zachary Scott. Directed by Michael Curtiz.

1950 **THE DAMNED DON'T CRY (Warners)**—With David Brian. Directed by Vincent Sherman.

HARRIET CRAIG (Columbia)—Directed by Vincent Sherman.

1951 **GOODBYE, MY FANCY (Warners)**—With Frank Lovejoy, Robert Young. Directed by Vincent Sherman.

1952 **SUDDEN FEAR (RKO)**—With Jack Palance, Gloria Grahame. Directed by David Miller.

THIS WOMAN IS DANGEROUS (Warners)—With Dennis Morgan, David Brian. Directed by Felix Feist.

1953 **TORCH SONG (MGM)**—With Michael Wilding. Directed by Charles Walters.

1954 **JOHNNY GUITAR (Republic)**—With Sterling Hayden, Scott Brady. Directed by Nicholas Ray.

1955 **FEMALE ON THE BEACH (Universal)**—With Jeff Chandler, Jan Sterling. Directed by Joseph Pevney.

QUEEN BEE (Columbia)—With Barry Sullivan, John Ireland. Directed by Ranald MacDougall.

George Pratt

Index to Resources in the George Eastman House Collection

Over the years, the George Eastman House has accumulated an impressive collection of apparatus, documents, books, and photographs covering the entire range of the history of photography. Even though the exhibits are constantly rotated, it is possible to display only a small part of this collection. To list, in the conventional catalogue format, each individual item would produce a reference work so unwieldy as to be of questionable value. As an index to the resources which are available to the student of the history of photography we shall publish, in each issue of IMAGE, summary descriptions of the most important material, with illustrations of the most typical and most outstanding items.

Following each paragraph of description is a notation of the source. The frequent recurrence of the names of Cromer and Boyer deserves special mention.

In 1939, the Eastman Kodak Company acquired the remarkable private collection of Gabriel Cromer, formed in Paris between World Wars I and II. Cromer collected in the hope that the French government would build a national museum of photography. He died before his plans materialized. The collection was deposited at the George Eastman House at the time of its formation as a museum, and forms the basis of the historical displays.

Alden Scott Boyer presented his collection to the George Eastman House in 1950, three years before his death. The collection is particularly strong in books and photographs, and supplements admirably the Cromer collection.

Photographs are supplied of any of the items illustrated. The price for an 8x10 inch, double-weight print, is $2.00. Please order by negative numbers after each description.

PRE-PHOTOGRAPHY

The birth-year of photography may be taken as 1839, when two practical techniques were made public—Henry Fox Talbot's Talbotype and Louis Jacques Mandé Daguerre's Daguerreotype. Behind these two inventions lay years of experimentation and research towards a method of making pictures quickly, easily, accurately, and inexpensively. The cultural history of photography begins with these pre-photographic techniques.

SILHOUETTES

The simplest method of making a likeness is to trace, life-size, the shadow of a profile cast by a point source of light, such as a candle. Even a tyro can make a simple outline drawing from the tracing, and fill it in with black. This silhouette technique was a popular pastime during the days of Louis XV, and owes its name to the Comptroller of Finances, Etienne de Silhouette, who was ridiculed by caricatures made this way.

AUTOGRAPH ALBUM, begun in 1786 by J. H. Schwarz while a student at the University of Tubingen, Germany. It contains 36 silhouettes of fellow students. Cromer coll. (Neg. 2230)

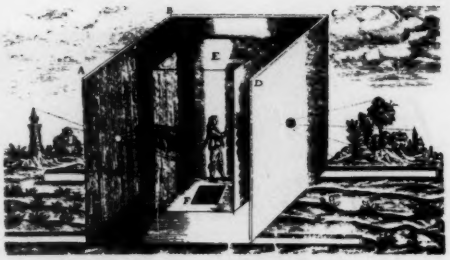
PHYSIONOTRACE

A machine for making reduced copies of profiles automatically on a copper plate, simply by tracing the outline, was invented in 1786 by a French court musician, Gilles Louis Chrétien (1754-1811). By means of his "physionotrace," thousands of profiles were made in the late18th century.

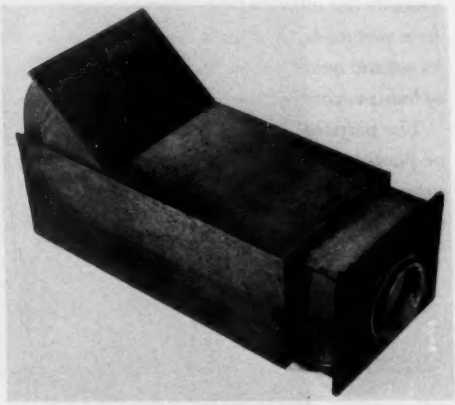
ENGRAVING made by G. L. Chretien with his physionotrace from a portrait of himself drawn by Fouquet, 1792. Plate size, 6.7x8.3 cm. One of nine examples of physionotraces used to extra-illustrate a copy of Henry Vivarez' book, *Le Physionotrace* (Lille, 1906). Cromer coll. (Neg. 2239.)

CAMERA OBSCURA

The camera was first known as a camera obscura (literally dark room), and was simply a room with a pinhole or a simple lens in one wall which threw an image on the opposite wall of what lay outside the room. It was thus described by Leonardo da Vinci in his unpublished notebooks and, for the first time in print, by Jacopo della Porta in 1558. It was made portable in the 17th century, and was widely used by artists in the 18th century. The ground glass image was traced to help solve perspective problems.



ENGRAVING of a camera obscura, shown in "cut away." What amounts to a small building has been carried by poles, like a sedan chair, to the selected scene. The artist has climbed inside through a trap door, and is tracing the image cast by one of the lenses. From the book *Ars Magna Lucis et Umbræ*, by Athanasius Kircher (Amsterdam, 1671). Gift of Albert Boni. (Neg. 1510.)



CAMERA OBSCURA, probably made in France, about 1780. Wooden telescoping body; H. 15.2 cm; W. 19.7 cm.; L., extended, 55.9 cm.; telescoped, 40.6 cm. Simple lens, focal length, 48.3 cm., diameter 7.6 cm. Mirror set at 75° reflects rays to ground glass, 14 x 17.8 cm., beneath folding wooden hood. Cromer coll. (Neg. 2232.)

CAMERA OBSCURA, probably made in France, about 1830. Wooden telescoping body: H. 11.4 cm.; W. 13.7 cm.; L., extended, 30.5 cm.; telescoped 22.9 cm. Simple lens: focal length, 21 cm.; in brass mount with rack and pinion focusing knob and two pivoted Waterhouse stops. Mirror set at 45° reflects rays to ground glass, 8.3 x 10.2 cm., beneath folding wooden hood. Cromer coll.

Pictures from the Collection

The survival of a picture is intimately connected with its esthetic quality. If it were possible to locate and measure this quality we could call it an "esthetic ingredient," and point definitely to that which caused the picture to appeal to and give pleasure to succeeding generations—sometimes continuously, sometimes skipping whole centuries. For instance the ancient Egyptian queen, NEFRE-TETE, *is as contemporary as a Vogue model. As a picture becomes older, the reasons for its survival wear away, at first rapidly, until its artistic quality acquires major proportions. This seems to be one of the most persistent of human accomplishments.*

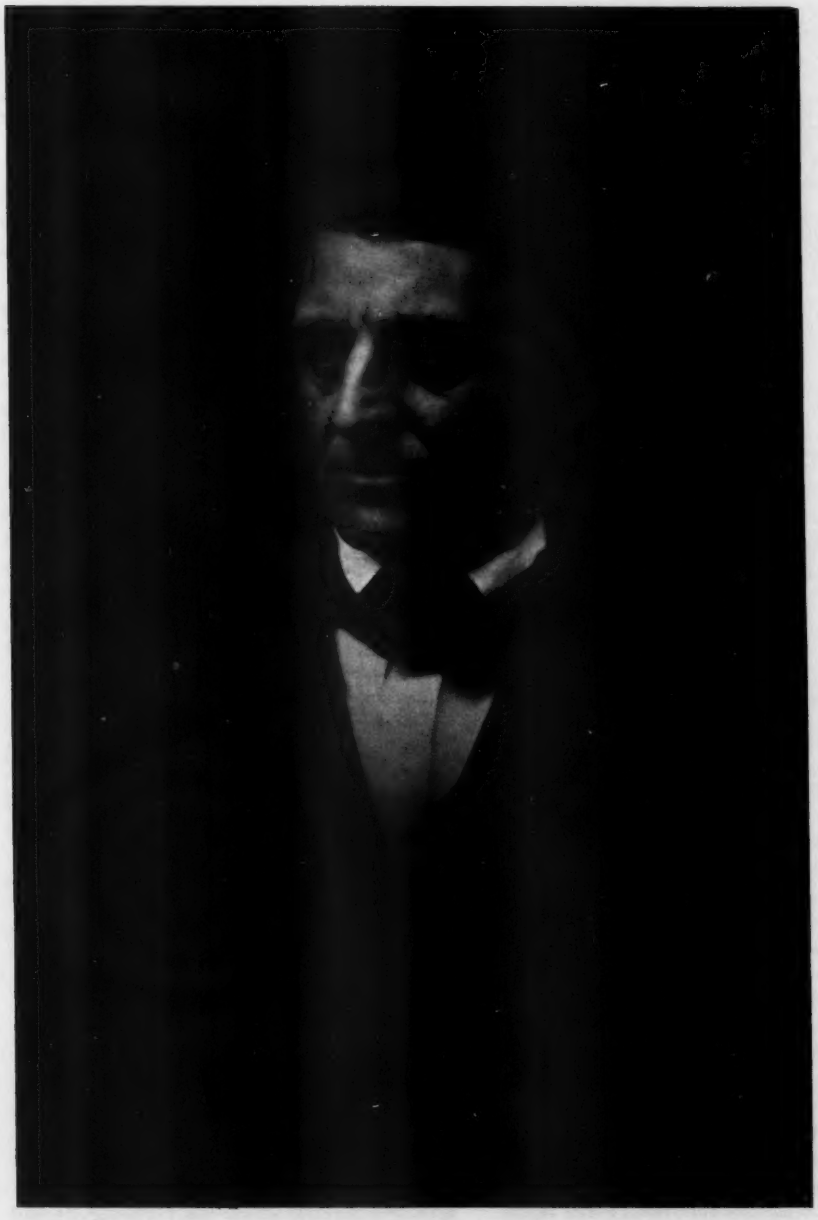
The purpose of this section of the magazine is to dip into the Eastman House collection of photographs to find those pictures which will give enjoyment to the people of the present. We will call them neither "greats" nor "masterpieces." Since photography is only a century old, we will let the people of another century commit themselves.

SOUTHWORTH & HAWES was a noted Boston photographic studio, among the first in this country. Of the two men, Hawes was especially in love with the Daguerreotype and regretted that the more efficient, negative-positive processes had outmoded it in twenty years or so. Thirty years after the firm had given up the daguerreotype process, he tried to revive it.

A substantial number of the prominent figures of the 1840-1860 period came to their Boston studio. The special quality that this firm seemed to impart to their clients is clearly visible in this portrait of Ralph Waldo Emerson. Perhaps photographers do not *give* a personality trait to people in front of their camera, though this is a generous way to describe a complex, subtle, and difficult and nearly secret activity by which they cause a certain quality to rise to the surface of the faces of their sitters. In the case of Southworth and Hawes, the quality seen glowing in this portrait can be found over and over again in their work, whether they be men or women, boys or girls, the great men that posed for them, or the everyday people.

We can call this quality one of friendliness, of warmth, of inward calm or something quietly lovable. Whatever we name it, this quality is a mark of the firm's photographs, and since Hawes was not the business member of the firm, we can surmise that it is his personality that shines quietly in the best of the portraits. It was his way with people that produced many of the grandest portraits in photography.

The albumin print in the Eastman House collection was made by Hawes from his own original Daguerreotype. The latter is apparently lost.



Portrait of Ralph Waldo Emerson from a Daguerreotype
by Albert Sands Southworth and Josiah Johnson Hawes
About 1850

THE ROSS "DOUBLET" LENS

by Rudolf Kingslake

In 1841 the urge to design a high-aperture portrait lens to be used with the new Daguerreotype process was not confined to France and Germany, where Chevalier and Petzval respectively had made their much-publicized contributions to optics. In England also, Andrew Ross (1798-1859) began experiments with the same end in view. His first objective, like Petzval's, consisted of a normal telescope objective in front, with another cemented doublet widely spaced from it, but in Ross's case the rear component consisted of a plano-convex crown lens cemented to a negative meniscus element (Fig. 1), the cement used being apparently castor oil!

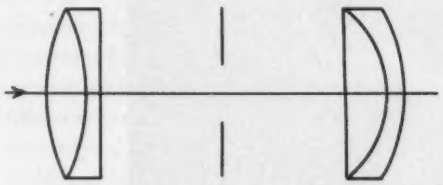


Fig. 1. The Ross "Collen" Lens.

The lens was a 19-inch *f*/4.8 Portrait objective of 3¾ inches diameter, made especially for the well-known miniature painter Henry Collen, who, besides being a painter, was also an early pioneer in photography. Unfortunately, as Ross, like Chevalier, did not employ a sound mathematical approach to his design, the lens was not particularly satisfactory, and the field was so strongly curved that the thin paper negative had to be compressed between two curved glasses, eight inches in diameter, while the photograph was being made. The original lens is now in the museum of the Royal Photographic Society in London and no further examples were constructed.

However, there must have been a germ of good optics in this arrangement because Andrew Ross's son, Thomas (1818 to 1870), constructed in 1864 a series of most successful lenses on the same general plan, called simply "Ross Doublets" (Fig. 2). The first was an extreme wide-angle lens (a 100° field was claimed) working at a low aperture, but shortly afterwards modifications were placed on the market covering first a medium angle of view, and later the famous "Instantaneous Doublet" having a working aperture as high as *f*/15 and covering a narrower field. The three doublets showed a progressive increase in the central airspace together with a progressive flattening of the two meniscus components. Actually a similar design had been proposed a year or two earlier by Thomas Grubb, chief engineer to the Bank of Ireland and an ardent student of optics. Grubb had simply combined a normal Chevalier achromat with a landscape lens of his own reversed form, but Ross possessed much better manufacturing and sales facilities than Grubb and was able to make his lens available to photographers in large numbers.

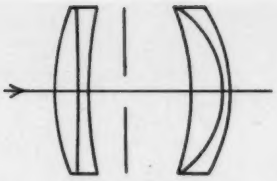


Fig. 2. Ross's "Doublet."

The chief reason for the success of the Ross Doublet was its almost perfect freedom from distortion together with a wide and comparatively flat field, so that, in spite of its uncorrected spherical aberration and relatively low working aperture, the lens became very popular with photographers. Indeed, the praise of some of the photographic writers of the time for this lens is almost overwhelming.

It is interesting to note that in 1878, F. von Voigtländer patented (DRP 5761) an *f*/3.5 Portrait objective (Fig. 3) of a form closely resembling the old Collen lens. However, by that time, thanks mainly to von Seidel's studies, the theory of lenses was much better understood, and the Voigtländer lens gave excellent definition over a flat field. This type of construction has become the basis of almost all of the high-aperture projection lenses used today.

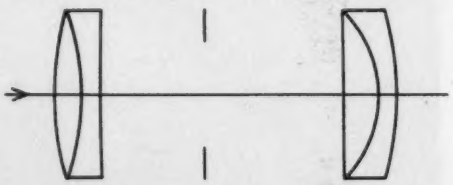


Fig. 3. Voigtländer's lens of 1878.

BOOKS RECEIVED

IMPRESSION OF EUROPE by Ihei Kimura. Tokyo, Asahi Shimbu Pub. Co. Ltd. 1955. 37 pp., 203 plates, 2,500 yen.

The impressions of Japan's No. 1 photographer on a six months' trip through Europe in 1954. He concentrated on the people instead of the sights. Many of the pictures are reproduced in color. All are in the popular photo-journalistic style.

THE FACE OF NEW YORK by Andreas Feininger and Susan E. Lyman. New York, Crown Pub., Inc. 1955. 185 pp., 202 illust. $5.00.

To the accompaniment of descriptions by Susan Lyman, of the Museum of the City of New York, Andreas Feininger made new photographs of many of the same places illustrated with old photographs and engravings. The pictures, made with the telescopic lens, give the peculiar collapsed-space effect characteristic of such lenses. The old and new theme shows some fabulous contrasts.

LEICA MANUAL AND DATA BOOK, Thirteenth Edition, by Willard Morgan, Henry Lester, John Carroll and Dorthy Gelatt. New York, Morgan and Lester, 1955. 456 pp., illust. $6.00.

Because of the newest Leica, the M 3 model, the manual has undergone a complete revision. The editors say, "unlike earlier editions, this volume places less stress upon the inspirational part of photography with the Leica Camera. Instead, it places before the user a well-organized, practical system of photography made easier and more effective through greatly improved cameras, lenses, accessories and through better photographic materials recently made available."

1955 UNIVERSAL PHOTO ALMANAC. Edna Bennett, Contributions Editor. New York, Falk Publishing Company, 1954. 254 pp., illust. $2.50.

As in the past, this year's Almanac consists of general articles, a picture section (of photographs from the Rapho-Guillumette agency, largely by Frenchman), an impressive tabulation of technical data, a list of markets for free lance photographers, and a bibliography. The current issue is distinguished by John Steinbeck's moving tribute to the famous war photographer, Robert Capa, who was killed in Northern Viet Nam. In two pages of vivid prose. Steinbeck gives us a warm, human profile of his friend and fellow correspondent.

THE HISTORY OF PHOTOGRAPHY by Helmut Gernsheim in collaboration with Alison Gernsheim. London, Oxford University Press, 1955. 395 pp., 359 illust. $16.50.

Of Gernsheim's many publications, this is his most important and comprehensive work. Profusely illustrated, it leads us from the prehistory of photography to the first world war.

THE PREHISTORY OF PHOTOGRAPHY includes the development of the camera obscura from the "darkened room," to Thomas Wedgwood's experiments.—THE INVENTION OF PHOTOGRAPHY discusses Niepce's, Daguerre's, and Fox Talbot's processes and Herschel's contributions.—THE EARLY YEARS OF PHOTOGRAPHY traces the use of the Daguerreotype and Talbotype in Britain and the Continent and the evolution of glass negatives and albumen paper.—THE COLLODION PROCESS describes the rapid broadening of the scope of photography, its popularization and the mass use of portraiture.—THE GELATINE PERIOD handles materials and methods in use to this day and includes a summary of pictorial photography. A brief historical survey of photomechanical printing processes concludes the main part to which a bibliography of modern books and historical tables are appended. Source material is quoted in foot notes. A detailed discussion of the *History* will appear in a future issue of *Image*.

ARTICLES WRITTEN BY MEMBERS of the Eastman House staff have appeared recently in other publications. *New Directions 15* which appeared in October included an article on "Photographing the Reality of the Abstract," by Beaumont Newhall. It states differences between the artist-photographer and the documentarian-photographer. *Camera* (Switzerland) published a critical and biographical essay by Mr. Newhall on Henri Cartier-Bresson in its October issue which was given over mainly to this photographer. The issue appeared in Europe at the same time as the Cartier-Bresson exhibit at the Louvre. *Photography* (London) published in its October issue a piece by Minor White called "Towards Camera." This states some differences between the artist-photographer and the painter. The same staff member is represented in the fall issue of *Leica Magazine* by a description of the Eisenstaedt "25th Anniversary" show that *Life* and Eastman House are touring jointly; and by a commentary on Eisenstaedt as man and photographer.

ENTRANCE HALL OF GEORGE EASTMAN HOUSE

George Eastman built this Georgian-Colonial style mansion in 1905. It was inherited by the University of Rochester in 1932. When it was decided to establish a memorial to George Eastman in the form of a living museum of photography, the University of Rochester gave the house and grounds. It was opened to the public in 1949.

In reference to the cover picture, the entrance hall is located behind the columns at the extreme right side of the picture. The Dryden Theatre, the gift of Mr. and Mrs. George B. Dryden, is seen at the extreme left of the photograph. This was added in 1951.